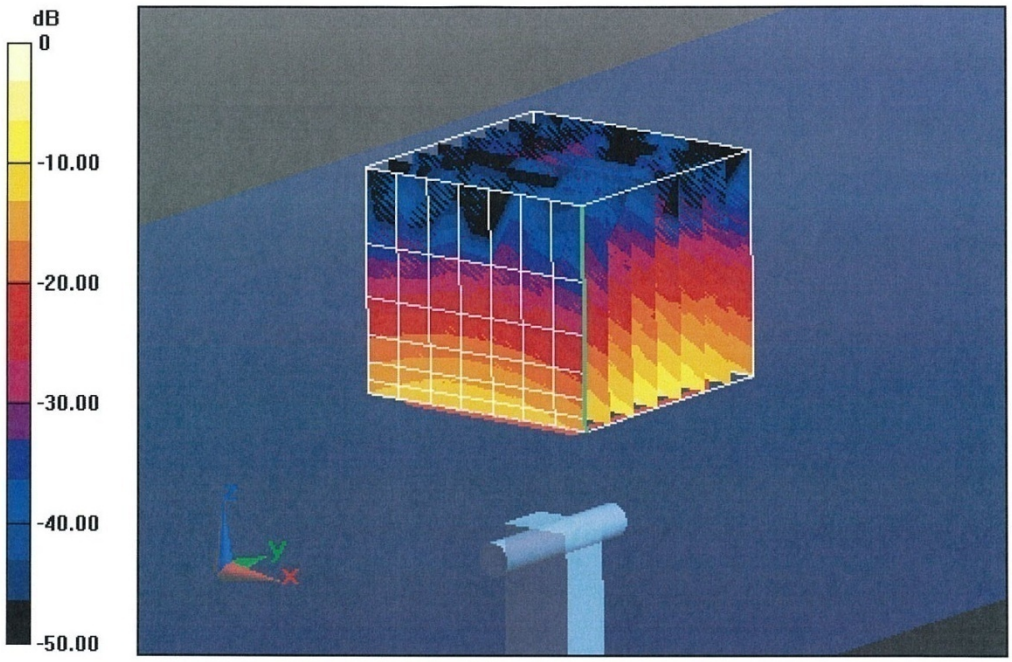
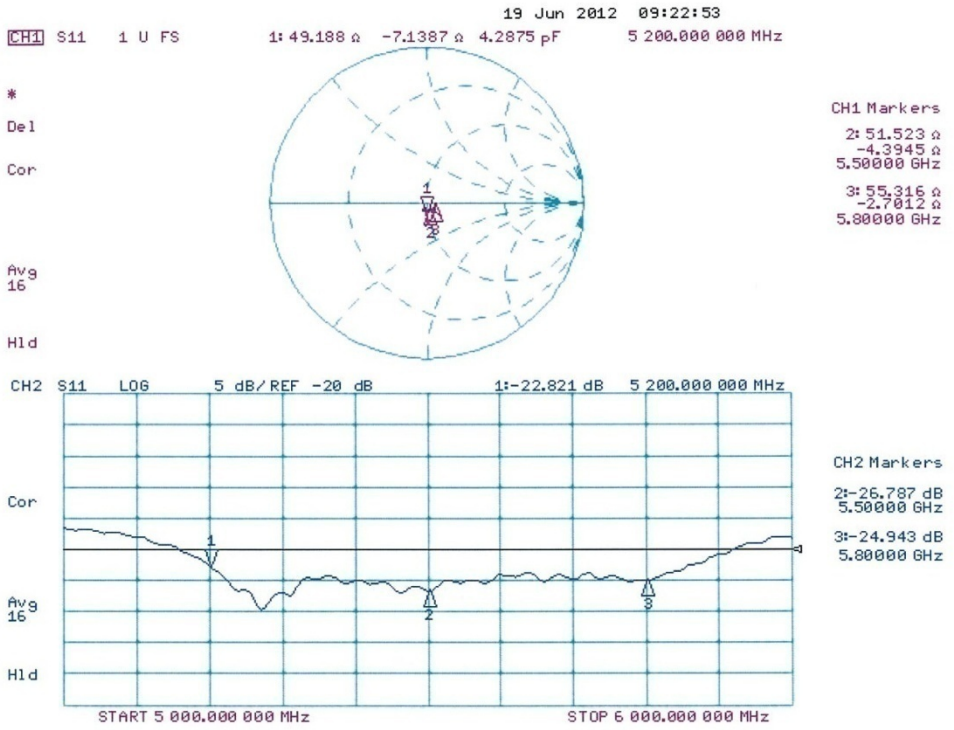


0 dB = 20.0 mW/g = 26.02 dB mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 18.06.2012

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1040

Communication System: CW; Frequency: 5200 MHz, Frequency: 5500 MHz, Frequency: 5800 MHz
Medium parameters used: f = 5200 MHz; σ = 5.37 mho/m; ε_r = 47; ρ = 1000 kg/m^3 , Medium parameters used: f = 5500 MHz; σ = 5.76 mho/m; ε_r = 46.5; ρ = 1000 kg/m^3 , Medium parameters used: f = 5800 MHz; σ = 6.16 mho/m; ε_r = 46; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

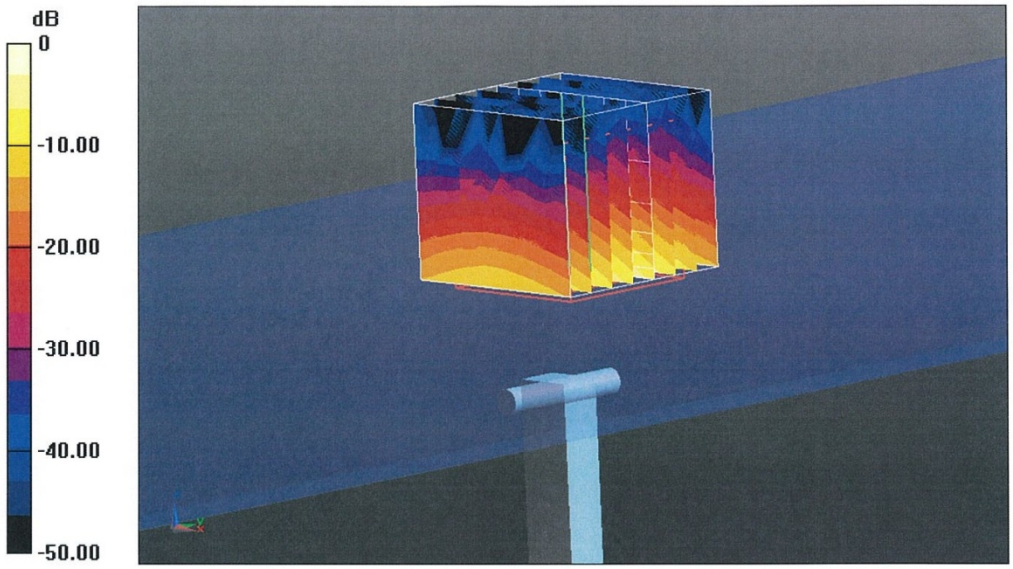
DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(4.91, 4.91, 4.91); Calibrated: 30.12.2011, ConvF(4.43, 4.43, 4.43); Calibrated: 30.12.2011, ConvF(4.38, 4.38, 4.38); Calibrated: 30.12.2011;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 58.667 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 29.022 mW/g
SAR(1 g) = 7.37 mW/g; SAR(10 g) = 2.07 mW/g
Maximum value of SAR (measured) = 17.2 mW/g

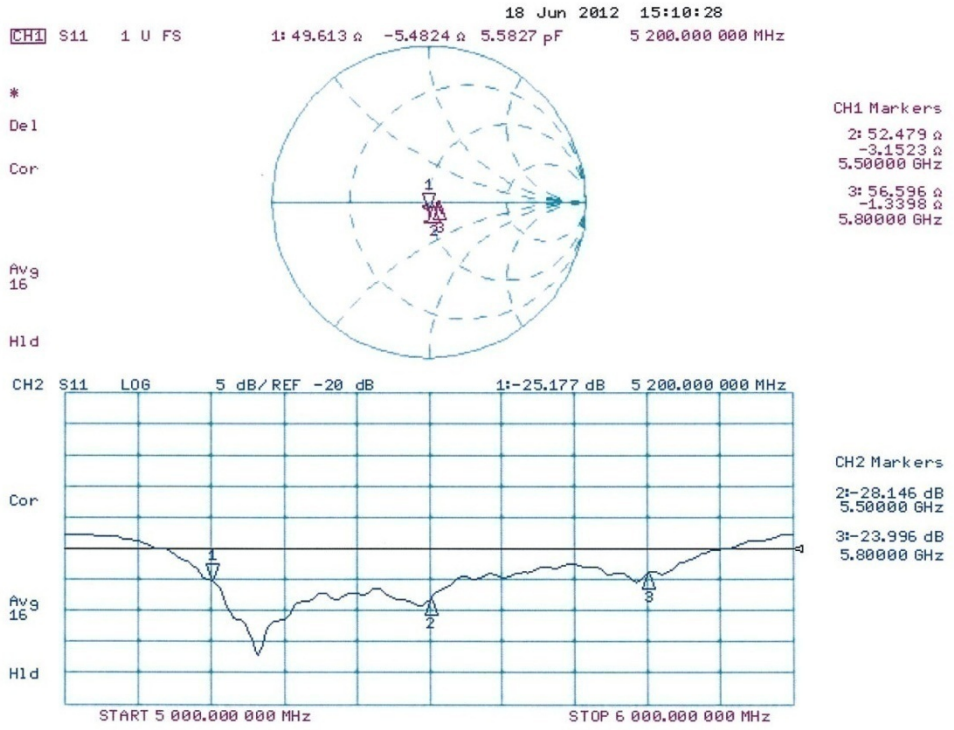
Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 58.708 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 33.769 mW/g
SAR(1 g) = 7.87 mW/g; SAR(10 g) = 2.19 mW/g
Maximum value of SAR (measured) = 19.0 mW/g

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.529 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 34.868 mW/g
SAR(1 g) = 7.44 mW/g; SAR(10 g) = 2.06 mW/g
Maximum value of SAR (measured) = 18.1 mW/g



0 dB = 18.1 mW/g = 25.15 dB mW/g

Impedance Measurement Plot for Body TSL



ANNEX I DIPOLE QUALIFICATION FOR THE EXTENDED 3-YEAR CALIBRATION INTERVAL

G1 Dipole750

The information and documentation below are provided to qualify the extended 3-year calibration interval of dipole.

G1.1 List of Equipment

No.	Name	Type	Serial Number
01	Network analyzer	E5071C	MY46110673
02	Power meter	NRVD	102083
03	Power sensor	NRV-Z5	100542
04	Signal Generator	E4438C	MY49070393
05	Amplifier	60S1G4	0331848
06	E-field Probe	SPEAG ES3DV3	3149
07	DAE	SPEAG DAE4	771
08	Dipole Validation Kit	SPEAG D750V3	1045

G1.2 Results of Impedance, Return-loss and System validation

Dipole 750 - Head

		Year		Deviation	Limit
		2011	2012		
Impedance	Real (Ω)	54.2	51.7	2.5Ω	Deviation < 5Ω
	Imaginary (Ω)	-2.3	0.9	3.2Ω	Deviation < 5Ω
Return-loss (dB)		-26.8	-26.7	0.1dB	Deviate < 0.2dB
System validation	10g	1.4	1.43	2.14%	Deviation < 10%
	1g	2.14	2.21	3.27%	Deviation < 10%

Dipole 750 - Body

		Year		Deviation	Limit
		2011	2012		
Impedance	Real (Ω)	49.5	49.6	0.1Ω	Deviation < 5Ω
	Imaginary (Ω)	-4.1	0.6	4.7Ω	Deviation < 5Ω
Return-loss (dB)		-27.5	-27.6	0.1dB	Deviate < 0.2dB
System validation	10g	1.45	1.47	1.38%	Deviation < 10%
	1g	2.2	2.25	2.27%	Deviation < 10%

According to the above tables, it is not necessary to recalibration the dipoles in 2012.